

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P563076

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563076
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-3HI-35-UNV-81-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11062.0 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

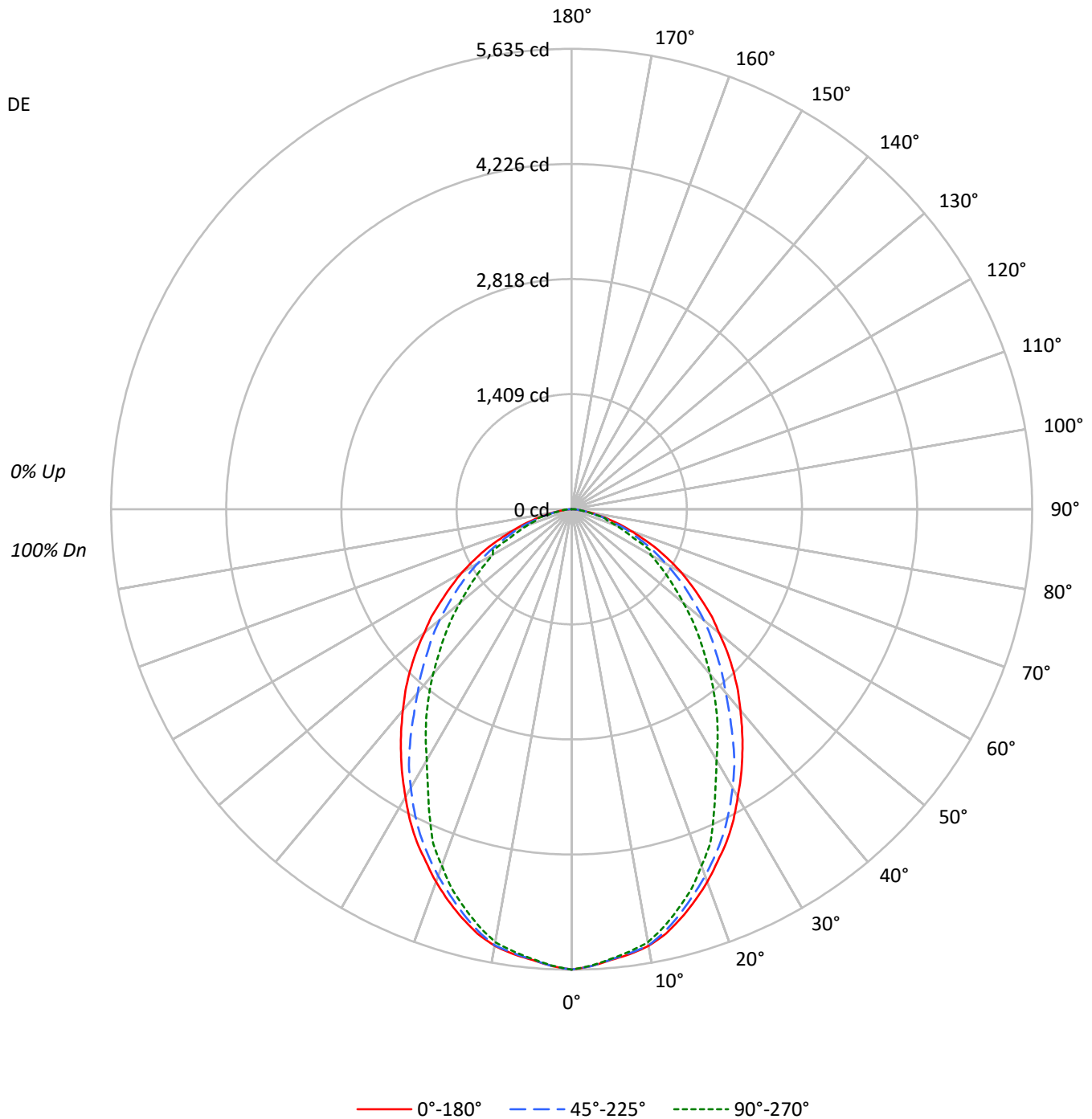
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563076

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-81-86-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563076

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-81-86-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7582	7582	7582
5°	7479	7470	7461
10°	7414	7405	7351
15°	7214	7141	7042
20°	6949	6837	6650
25°	6663	6518	6112
30°	6315	6113	5506
35°	5981	5650	5093
40°	5641	5149	4634
45°	5318	4760	4190
50°	4922	4418	3736
55°	4554	4004	3347
60°	4172	3576	2997
65°	3671	3132	2655
70°	3024	2742	2255
75°	2404	2100	2201
80°	1616	1514	1413
85°	1005	1207	1408

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5318 cd/sqm



TEST NUMBER: P563076

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-81-86-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	524.5	4.7
10°-20°	1439.5	13.0
20°-30°	1992.9	18.0
30°-40°	2125.0	19.2
40°-50°	1938.6	17.5
50°-60°	1518.8	13.7
60°-70°	989.9	8.9
70°-80°	438.5	4.0
80°-90°	94.2	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3957.0	35.8
0°-40°	6082.0	55.0
0°-60°	9539.4	86.2
0°-90°	11062.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11062.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5635	5635	5635	5635	5635	
5°	5537	5531	5531	5524	5524	526
15°	5179	5179	5127	5075	5055	1456
25°	4488	4462	4391	4234	4117	2061
35°	3642	3615	3440	3179	3101	2277
45°	2795	2736	2502	2293	2202	2153
55°	1941	1883	1707	1505	1427	1741
65°	1153	1088	984	1003	834	1136
75°	462	430	404	384	423	496
85°	65	72	78	85	91	90
90°	0	0	0	0	0	



TEST NUMBER: P563076

CATALOG NUMBER: FSR-24-4-LD4-3HI-35-UNV-81-86-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5634.8	5634.8	5634.8	5634.8	5634.8
2.5°	5595.7	5595.7	5595.7	5589.2	5589.2
5°	5537.1	5530.6	5530.6	5524.1	5524.1
7.5°	5491.5	5485.0	5478.5	5472.0	5458.9
10°	5426.4	5426.4	5419.9	5387.3	5380.8
12.5°	5322.2	5315.6	5289.6	5244.0	5231.0
15°	5178.8	5178.8	5126.7	5074.6	5055.1
17.5°	5022.5	5016.0	4950.8	4898.7	4872.7
20°	4853.1	4840.1	4775.0	4690.3	4644.7
22.5°	4664.2	4664.2	4586.0	4475.3	4429.7
25°	4488.3	4462.3	4390.6	4234.3	4117.0
27.5°	4286.4	4247.3	4169.1	3947.6	3810.8
30°	4064.9	4045.4	3934.6	3648.0	3543.8
32.5°	3856.4	3823.9	3706.6	3407.0	3322.3
35°	3641.5	3615.4	3439.5	3179.0	3100.8
37.5°	3426.5	3393.9	3172.4	2964.0	2866.3
40°	3211.5	3172.4	2931.4	2742.5	2638.3
42.5°	3009.6	2957.5	2723.0	2521.0	2403.8
45°	2794.6	2736.0	2501.5	2293.0	2201.8
47.5°	2579.6	2527.5	2312.6	2097.6	1993.4
50°	2351.6	2306.0	2110.6	1895.6	1784.9
52.5°	2162.7	2091.1	1902.2	1687.2	1596.0
55°	1941.2	1882.6	1706.7	1504.8	1426.6
57.5°	1739.3	1680.7	1517.8	1328.9	1263.8
60°	1550.4	1465.7	1328.9	1166.1	1113.9
62.5°	1341.9	1276.8	1159.5	1022.7	1087.9
65°	1153.0	1087.9	983.7	1003.2	833.8
67.5°	944.6	912.0	820.8	729.6	703.5
70°	768.7	729.6	697.0	599.3	573.3
72.5°	612.3	573.3	527.7	475.5	456.0
75°	462.5	429.9	403.9	384.3	423.4
77.5°	319.2	306.2	286.6	267.1	260.6
80°	208.5	201.9	195.4	188.9	182.4
82.5°	123.8	123.8	123.8	123.8	123.8
85°	65.1	71.7	78.2	84.7	91.2
87.5°	39.1	39.1	45.6	52.1	58.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)